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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/698,736

10/31/2003

Jerry Z. Shan

200208138-1

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01/21/2009

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EXAMINER

KUNDU, SUJOY K

ART UNIT

PAPER NUMBER

2863

NOTIFICATION DATE

DELIVERY MODE

01/21/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/698,736	<b>Applicant(s)</b> SHAN ET AL.	
	<b>Examiner</b> SUJOY K. KUNDU	<b>Art Unit</b> 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant claims, "training a detector by determining a value for a sensitivity parameter using the plurality of sequences." Applicant fails to describe the purpose or use of determining a value in the claim.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With regards to Claim 1, The claims are directed to a judicial exception; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106)), the claims must have either physical transformation and/or a useful, concrete and tangible result. The claims fail to include transformation from one physical state to another. Although, the claims appear useful and concrete, there does not appear to be a tangible result claimed. Merely determining a value for a sensitivity parameter using the plurality of sequences would not appear to be sufficient to constitute a tangible result, since the

Art Unit: 2863

outcome of the determining a value for a sensitivity parameter using the plurality of sequences step has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12, 14-23, 25-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Boerner et al. (US 2003/0009399).

With regards to Claim 1, 12, 15, 17, 22, 25, and 27 Boerner teaches a processor-based method comprising:

receiving a data stream comprising a plurality of temporally ordered data points (Figure 1, Paragraph 34);

generating a plurality of sequences from a first portion of the data stream (Figure 1, Paragraph 34-36); and

training a detector by determining a value for a sensitivity parameter using the plurality of sequences (Figure 1, Paragraph 18) .

With regards to Claim 3, 19, 26, Boerner teaches a method wherein running the detector comprises:

generating a score corresponding to the second portion of the data stream  
(Paragraph 39-40);

comparing the score to the determined value for the sensitivity parameter; and  
signaling detection (Paragraph 18).

With regards to Claim 2 and 16, Boerner teaches the method comprising running  
the detector on a second portion of the data stream (Paragraph 34-36).

With regards to Claim 4 and 18, Boerner teaches the method wherein training the  
detector by determining the value for the sensitivity parameter comprises selecting the  
value for the sensitivity parameter based on a target level for an estimated performance  
characteristic of the detector (Figure 1, Paragraph 43).

With regards to Claim 5, Boerner teaches the method wherein training the  
detector by determining the value for the sensitivity parameter comprises:

generating a score for each of the plurality of sequences (Paragraph 39-40); and  
selecting the value for the sensitivity parameter based on the scores (Paragraph  
18).

With regards to Claim 6, Boerner teaches the method wherein generating the  
plurality of sequences comprises:

inferring a statistical distribution of a known type to characterize the first portion  
of the data stream (Paragraph 43); and

generating the plurality of sequences from the statistical distribution (Paragraph  
43-45).

With regards to Claim 7, Boerner teaches the method wherein the statistical distribution is a discrete distribution containing data points from the first portion of the data stream, and wherein generating the plurality of sequences from the statistical distribution comprises selecting data points from the discrete distribution (Paragraph 43-45).

With regards to Claim 8, 28, Boerner teaches the method wherein inferring a known type of distribution comprises determining a set of parameters corresponding to the known type of statistical distribution (Paragraph 43-45).

With regards to Claim 9, Boerner teaches the method wherein generating the plurality of sequences comprises:

selecting a change based on a distribution of change (Paragraph 43-45); and  
generating a changed sequence based on the selected change (Paragraph 43-45).

With regards to Claim 10, Boerner teaches the method wherein the value of the sensitivity parameter comprises determining a plurality of values for the sensitivity parameter using the plurality of sequences (Paragraph 18).

With regards to Claim 11, Boerner teaches the method wherein determining the value of the sensitivity parameter comprises calculating a transformation of a second of the plurality of values for the sensitivity parameter (Paragraph 18, 43-46).

With regards to Claims 14, 20-21, and 23, Boerner teaches the method comprising raising an alarm when a respective detector signals detection when

Art Unit: 2863

parameterized by the respective sensitivity parameter and run on a second portion of a sufficient set of data streams (Paragraph 18, "indicator").

With regards to Claim 29, Boerner teaches system wherein for detecting comprises means for detecting an interesting event in a parameter of the plurality of distributions (Paragraph 43-46, 54 "trend").

With regards to Claim 30, Boerner teaches the system comprising means for injecting a change into the first portion of the data stream (Paragraph 34-36).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boerner (US 2003/0009399) in view of Cox et al. (5,734,592).

Regarding claims 13 and 24, Boerner teaches all the limitations discussed above, however Boerner does not teach a method for determining the value for the sensitivity parameter comprises determining the value for the sensitivity parameter at least partially on cost parameters.

Cox teaches a method for determining the value for the sensitivity parameter comprises determining the value for the sensitivity parameter at least partially on cost parameters (Claims, Column 11, Claim 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include teaches a method for determining the value for the sensitivity parameter comprises determining the value for the sensitivity parameter at least partially on cost parameters as taught by Cox into Boerner for the purpose of providing increase in operational time.

### ***Response to Arguments***

Applicant's arguments filed September 19, 2008 have been fully considered but they are not persuasive. With regards to the 112, second paragraph rejection. Applicant claims, "training a detector by determining a value for a sensitivity parameter using the plurality of sequences." Applicant fails to describe the purpose or use of determining a value in the claim.

Claim 1 is directed towards a method for determining a value for a sensitivity parameter using the plurality of sequences, the claim does not seem to be tied to a particular machine or transform a particular article (In re Bilski, F.3d (Fed. Cir. 2008) (en banc)).

As explained in the Interim Guidelines, the first step in determining whether a claim recites patent eligible subject matter is to determine whether the claim falls within one of the four statutory categories of invention recited in 35 USC 101: process, machine, manufacture, and composition of matter. The latter three categories define "things" or "products," while a "process" consists of a series of steps or acts to be performed. For purposes of 35 USC 101, a "process" has been given a specialized, limited meaning by the courts.



Based on recent Federal Circuit decisions, a 35 USC 101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state of thing. If neither of these requirements is met by the claim, the method is not a patent eligible process under 35 USC 101, therefore claim 1 is directed towards nonstatutory subject matter.

With regards to Claims 1, 15, 22, 25, and 27, applicant argues that Boerner fails to teach or suggest generating a plurality of sequences from a first portion of a data stream.

Boerner teaches generating a plurality of sequences from a first portion of a data stream shown in Paragraph 34. A plurality of time series data sets can be broadly interpreted as a plurality of sequences.

Applicant further argues that Boerner fails to teach or suggest determining a sensitivity parameter based on the plurality of sequences.

Boerner teaches determining a sensitivity parameter based on the plurality of sequences as shown in Paragraph 18. Boerner describes a threshold are based on the outputs of the time series data which broadly interpreted is a plurality of sequenced data.

Applicant is reminded that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued,

Art Unit: 2863

will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

While the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2863

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUJOY K. KUNDU whose telephone number is (571)272-8586. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. K. K./  
Examiner, Art Unit 2863

/Tung S. Lau/  
Primary Examiner, Art Unit 2863  
January 7, 2009